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Research Paper

Evaluation of inducible nitric oxide synthase inhibition on kidney function and structure in high-fat diet-induced kidney disease

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New Findings

- **What is the central question of this study?**
  The metabolic pathways regulating the effects of obesity on the kidney remain unknown. We sought to determine whether inducible nitric oxide synthase (iNOS) is involved in the underlying mechanisms of high-fat diet-induced kidney disease using a specific iNOS inhibitor, *N*6-(1-iminoethyl)-L-lysine hydrochloride (L-NIL).
- **What is the main finding and its importance?**
  We did not demonstrate an upregulation of *iNOS* renal expression after high caloric intake, suggesting that iNOS might not be a crucial player in the development of obesity-induced kidney disease. Although L-NIL treatment clearly ameliorated systemic metabolic parameters, the effect on loss of renal function, impairment of tubular integrity, oxidative stress and inflammation appeared to be more moderate.

Central obesity is related to caloric excess, promoting deleterious cellular responses in targeted organs. Nitric oxide (NO) has been determined as a key player in the pathogenesis of

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